Assessing hydrologic sensitivity in CMIP6: internal variability versus anthropogenic forcing

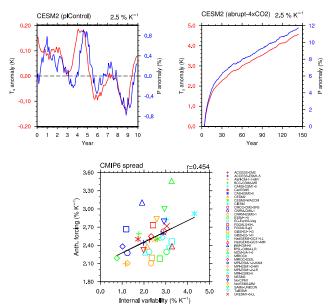
Jesse Norris

Collaborators: Alex Hall, Chad Thackeray, Di Chen, Gavin Madakumbura, and Naomi Goldenson

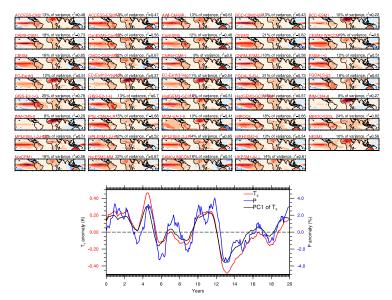




Correlation in hydrologic sensitivity in CMIP6 between internal variability and anthropogenic forcing cases



PC1 of T_s explains more than half of tropical-mean precip variance (r^2)



Summary

- Hydrologic sensitivity is reasonably correlated across CMIP6 models between internal variability (piControl) and anthropogenic forcing (abrupt-4xCO2, 1pctCO2, scenarioMIP).
- Variability of tropics-mean precip closely follows first PC of tropical surface temperature (resembling ENSO).
- Suggests hydrologic sensitivity may be constrained, but diagnosing from observations is complicated (not shown).



